

# KNOWLEDGE

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OFFICIAL SAFETY INFORMATION OF THE U.S. ARMY

## COMMUNICATION BREAKDOWN



U.S. ARMY

ARMY STRONG®

## FROM THE CSM THE SAFETY GAMBLE

After the nationwide frenzy surrounding last month's gigantic Powerball jackpot, I started thinking about odds. The average American stands a one in nearly 176,000,000 — that's 176 million — shot of winning any Powerball drawing within his or her lifetime. Yet countless people, including Soldiers and Family members, flock to convenience stores and other lottery outlets week after week, believing they'll pick the lucky numbers. What's puzzling to me, though, is that even while holding on to this far-fung hope, many think an accident could never happen to them.

Turns out, the lifetime odds of dying in an accident hit a little closer to home.

**In a car: one in 242**  
**From falls: one in 269**  
**As a pedestrian: one in 610**  
**By drowning: one in 1,028**  
**On a motorcycle: one in 1,295**

Those odds increase in direct correlation with indiscipline. Riding without a helmet or driving without a seat belt is a sure way to get your proverbial ticket punched should an accident occur. Driving, riding and swimming are just a few of the activities that make alcohol a losing bet. And speeding, whether it's on the road or one of our nation's many waterways, can make your luck run out even faster.

The fact is, many of our Soldiers gamble with their safety daily in ways both big and small. As a leader, it's your duty to know and address the who and how. There's no doubt you'll counsel the Soldier who's busted taking his helmet off just outside the gate or caught leaving the club drunk. But what about the one who routinely drives "just" 10 or 15 mph above the speed limit? There aren't degrees of indiscipline; it's a violation of the standards, plain and simple, and every instance of it must be dealt with accordingly.

We're now in our Army's deadliest time of year for accidents. Time off, PCS moves and other various events that have Soldiers away from work expose them to more risk. They deserve to enjoy their downtime, but we must ensure they do it wisely. Safety stand-downs, weekend safety briefings and informal conversations about personal risk management are all proven to have an impact on Soldier safety. Engaging with them more often, encouraging them to look out for one another and setting the example yourself can only increase the odds of everyone arriving back to your formation safe and alive.

There's no better time to start than now. June is National Safety Month, and the USACR/Safety Center has put together a media package to help focus your summer safety efforts. Informational articles, public service announcements from Army leadership, posters and other materials are all available at <https://safety.army.mil> for your convenience. The annual Safe Summer Campaign and Off Duty Safety Awareness Presentation are also live online, so there's no excuse for not having a robust summer safety program. We've made it easy — it's up to you to make it happen!

I've said it before, but it's critically important that we make Soldiers understand safety isn't a downer. Nothing kills the fun more than tragedy, a scene that's played out far too many times among Soldiers and their buddies off duty. Summer is a time for laughter and memories, not tears and memorial services for lives cut too short. Be a leader, set the example and your Soldiers will follow.

Thank you all for your hard work every day!

**Army Safe is Army Strong!**

**RICK STIDLEY**

Command Sergeant Major  
U.S. Army Combat Readiness/Safety Center



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## COMMUNICATION BREAKDOWN

CHIEF WARRANT OFFICER 2 RYAN WOHLERS  
C Company, 4th Battalion, 501st Aviation  
Fort Bliss, Texas

The winds at Biggs Army Airfield in El Paso, Texas, can howl. Standing on the flightline, the view looks eerily like the mountains of Afghanistan we all know so well.

I was in my Annual Proficiency and Readiness Test window and geared up for a night standardization ride. The first aircraft we ran up had maintenance issues. After 45 minutes of troubleshooting with our crew chiefs, my instructor pilot decided to call it quits, shut down and find another aircraft for our evaluation.

My company had no back-up aircraft, and all of the fully mission-capable Apaches were already out on training flights. We were late on our takeoff time by nearly by an hour and getting frustrated with the situation. After carrying our gear back into the hangar, I checked with the pilot in command for a tail number for a back-up from another company. My IP told me to preflight the aircraft and put my gear in the cockpit while he tracked down the logbook and maintenance personnel to launch us from the respective company where the aircraft was assigned.

The winds were kicking up greater than 30 knots and gusting to 40, so the aircraft was tied down and all the covers were in place. After removing the fly-away gear and conducting a thorough preflight, I placed my gear in the front seat. More than 30 minutes had passed by this point, and I knew we needed to update our weather and amend the takeoff time on our flight plan. My IP quickly approached the aircraft and told me to grab my gear to take it inside. He was unable to find the appropriate maintenance personnel to launch us and couldn't preflight the logbook. He called the commander to inform him of the decision to cancel the mission and left a voicemail.

I gathered all my gear and placed the engine intake cover plug in the No. 2 engine inlet because the winds were strong and the commander's intent was to secure all aircraft overnight on the flightline. Before I secured the No. 1 side, my IP was growing impatient and sternly said to leave the other side for the maintenance personnel to secure.

As we entered the hangar, the commander called back to inform my IP that he had made the proper calls and maintenance personnel from the appropriate company were on their way to resolve the situation. After a brief discussion, my IP agreed to continue with the flight — though our timeline was pushed almost two hours to the right by the time we took off.

We met the crew chiefs and looked at the logbook together. On the way back to the aircraft, I was instructed to get my things in the cockpit immediately and he would take care of the walk-around. I jumped right in and didn't think about the engine inlet cover plug I had installed before leaving the aircraft. We started both engines and immediately saw a 20-30 degree difference between the two engines. It took a few moments for me to realize the plug was still in the engine inlet, and the crew chief removed it without incident.

My IP and I talked about our communication breakdown and what we could do to prevent a similar incident in the future. I was down on myself for the whole flight about failing to remind him of the condition, and he was upset equally about his failure to discover the deficiency during his walk-around. Fortunately, the aircraft was pointed directly into a 30 knot wind and the engine didn't experience a soft stall or hot start during the start-up sequence. There was not a significant spike in turbine gas temperature during the start, only the 20-30 degree difference above engine No. 1 when the TGT stabilized.

This incident could have easily resulted in a hot start, which is why it is imperative to always conduct a proper preflight and walk-around plus ensure communication and coordination between crewmembers. Stay vigilant and don't let complacency set in under any condition.



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## FRESH OUT OF LUCK

NAME WITHHELD BY REQUEST

It was June 28, 1997 — the night of the second Mike Tyson-Evander Holyfield fight. Everyone remembers that night because it's the fight where Tyson bit a chunk out of Holyfield's right ear. Unfortunately, I remember it for a different reason.

I was 21 years old, on top of the world and the proud new owner of a 1996 Honda CBR 600 F3. Man, that bike would fly. But I already wanted something faster. I always wore the proper personal protective equipment, including a helmet, gloves, heavy leather jacket and leather boots. On this night, however, I was wearing a helmet, long-sleeved shirt, boots and shorts.

I was attending a friend's party on base about two miles from my barracks. Of course, there was a keg, and, of course, I was drinking. I'm sure you can already see the recipe for disaster starting to take shape.

We all know the fight was historic, but because Tyson was disqualified in the third round, it didn't make for a good get-together. After a couple more drinks, I headed out with a large group of people leaving the party. One Soldier was doing the right thing by offering everyone a ride home. My riding buddy and I got into his truck and started to buckle up. At the last minute, though, I became concerned that the party host's son might play with my bike and accidentally pull it over onto himself. I decided I should ride my bike to my barracks rather than leave it behind.

My riding buddy supported my decision and said he'd follow me on his bike. We then both cranked up our bikes and hit the road. As soon as my bike topped 10,000 rpm, the adrenaline and alcohol in my bloodstream mixed, and any semblance of good judgment went out the window. I was now a slave to my adrenaline addiction.

I raced off, leaving my buddy in the dust. Caught up in the moment, I accidentally flew past my turn. I turned around and accelerated to nearly 100 mph before slowing to about 70 mph and attempting to turn onto the road that led to my barracks. Unfortunately, I was fresh out of luck. I turned too early and went onto the grass. My bike quickly slipped out from under me, slamming my right shoulder onto the ground. I remember hearing the sound of plastic scraping and breaking.

Once I stopped sliding, I immediately stood up to make sure I was still in one piece. I located my bike and attempted to pick it up. However, I couldn't lift it because the handlebars were broken in half. When I looked behind me, I saw that I'd slid nearly 200 feet! Then I saw something else that still horrifies me today — the twisted remnants of a stop sign that my bike had sheared off at the bottom. Had I been on the bike when it slid through that stop sign, I would have been cut in half just above the pelvis.

To this day, I don't know how I managed to avoid being more seriously injured. As it was, I'd burned a hole in the toe of each of my boots and had some gouges in my right shin. I was lucky that night because things could've ended up a lot uglier. Since then, I have made it my mission to tell other riders about that night — the stupidest thing I have ever done. If it helps just one rider decide not to mix alcohol, adrenaline and speed, then it was worth it.



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## GUILTY

RISK MANAGEMENT DIVISION STAFF

U.S. Army Technical Center for Explosive Safety  
McAlester, Okla.

*Editor's note: The following article is based on an actual court martial proceeding that occurred several years ago. It is being reprinted with permission from the U.S. Army Technical Center for Explosive Safety's spring 2012 Explosives Safety Bulletin.*

As the staff sergeant walked into the military courtroom to hear his fate, he had no idea what was about to happen to his military career. If he had only stopped and thought about what could go wrong, the sequence of events would certainly have been different.

The court was called to order. The staff sergeant and his defense counsel stood nervously, awaiting the verdict. As he waited, his mind wandered back several months to the day he cleaned out his range bag from the field exercise his unit just completed. The little cache of simulators he had accumulated over the weeklong exercise would really make for a great Fourth of July celebration at the lake. The artillery simulators would definitely make for one loud boom, and those green and red star clusters would look impressive with the rest of the fireworks he bought downtown.

He stashed the simulators in the front hallway closet of his on-base apartment since it was only a few days until the holiday weekend trip to the lake to celebrate America's birthday. He didn't realize that when he closed the door to the closet, the bag was jarred enough that one of the artillery simulators bounced out. Through opening and closing the door many times over the next few days, the pull cord on the simulator got tangled in the strings on a pair of shoes. As his wife later pulled the shoes out of the closet, the cord on the simulator was also pulled. The simulator began to whistle, and she realized something was not right. She did her best to back away from the door as the simulator exploded, knocking her against the hallway wall.

The explosion sent her into shock and caught the clothes in the closet on fire. Fortunately, the neighbors helped her and her 4-year-old daughter out of the apartment and extinguished the flames before the fire department and authorities arrived. Luckily, the other items did not ignite or detonate, which would have increased the size of the fire and endangered the entire building.

As the military police, explosives ordnance disposal detachment specialists and criminal investigation division officers began to investigate the events, it was evident the young staff sergeant made several mistakes during the last training exercise in which he would ever participate. The judge's gavel brought him back to reality as the verdict was read. His fate was sealed as the judge found him guilty on eight different charges and sentenced him to 10 years of hard labor, forfeiture of all pay and allowances, reduction to the lowest military rank and dismissal from the U.S. Army with a dishonorable discharge. His 11-year career was history, his family lost all its military benefits and their lives would never be the same again.

The staff sergeant just forgot to think. He never considered the consequences of what would happen if his wife or daughter was hurt or killed if the simulator cache accidentally exploded. If his daughter had opened the door and pulled those shoes out, she would not have realized what the whistling meant and could have possibly been seriously injured or killed. Those seemingly harmless simulators used in training are actually quite dangerous and can cause death. Unfortunately, we all go through those times when we think we can get away with things, and this one could have cost this family everything.

Always remember, military munitions are not toys and should never be removed from the training areas or exercises. In the wrong hands, they can cause pain and suffering to the ones we love. So, next time someone tells you they have the stars and boomers for the fireworks show, make sure they're talking about commercial fireworks you can legally buy at a stand, not military simulators and pyrotechnics.



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## THE INFAMOUS SUCKER HOLE

CHIEF WARRANT OFFICER 3 CHRISTOPHER TAYLOR  
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Edgewood, Md.

In early summer of 2011, our flight company was tasked with a two-part service mission. The first part required us to airlift an infantry unit based at Camp Dawson, W. Va., to Fort A. P. Hill, Va., for a three-day field training exercise.

At the end of the FTX, the second part of the mission would commence with the air movement of the requesting unit back to their home station. The lifts required two CH-47Ds based at Weide Army Airfield in Edgewood, Md. The estimated flight time for each lift would be about 3½ hours. The nearly 400-nautical-mile flights had three legs that avoided Baltimore and Washington, with the first moving in a counterclockwise direction and the second in the opposite direction.

The flight crews consisted of the commander, a pilot in command and rated maintenance test pilot; a new flight platoon leader, a first lieutenant who sat in the jump seat to learn and observe; and a new warrant officer performing pilot duties. This crew, along with its nonrated aviators in the back, would fly in the No. 2 aircraft on both lifts. I was the PC of the lead aircraft with another new warrant officer as my PI. In back, I had an experienced standardization instructor and crew chief crewing.

The first lift went as planned in the early hours of Tuesday morning, when we delivered the infantry unit to Fort A.P. Hill at the on-target time of 9 a.m. We then refueled and proceeded back to base. The second lift required us to pick up the infantry unit at 2 p.m. from A.P. Hill and return them to Camp Dawson. Show time was 10 a.m. with a 1 p.m. takeoff time from Weide AAF. The mission proceeded as planned, as we flew the unit to its destination, shut down for refuel and then departed on our third leg for home.

We accomplished good training and mentorship for our new pilots during the missions, but the last 10 minutes of the third leg started to unravel quickly. Initially, we started from Dawson AAF with a climb to 5,000 feet for terrain clearance and to take advantage of smoother air above the mountaintops at 3,000 feet. After approximately 45-50 minutes of flying, we flew out of the Appalachian Mountains and into decreasing elevation to the east. When we passed Fredrick Municipal Airport (50 nm west of Weide), we descended to 3,000 feet. There was a thin, scattered layer of clouds forming at what I estimated was 1,500-2,000 feet altitude. As we continued our track, the cloud layer gradually began to thicken, so I asked the commander if he wanted to descend to 1,000 feet. He replied, "No, let's stay on top."

The gaps in the cloud layer became few and far between, so I advised my crew that when we got closer to home, we might have to do some maneuvering to remain visual flight rules while descending through any potential cloud openings up ahead. Six miles from home, the cloud layer really began to thicken. We pressed on about two miles, passing our destination in an effort to locate a suitable opening, to no avail. The air mission commander then announced a 180-degree turn back to the west, affectively establishing a lead change. I instructed my PI to get out the approach plate and contact Potomac approach to request radar vectors for the localizer 15 approach into Martin State Airport. This is an airport about seven nm southwest of Weide that we often use as a recovery procedure should we encounter inadvertent instrument meteorological conditions in our area.

My PI was focused on contacting approach when I noticed he hadn't pulled out the approach plate. On top of that, he was getting frustrated with approach because he couldn't get his request in due to the late afternoon traffic being recovered into Baltimore/Washington International (a Class B airport) about 15 nm southwest of Martin State Airport.

At that point, I noticed the AMC aircraft maneuvering through a clearing, and my flight engineer announced it over the internal communications system. We were both on the right side of the aircraft when I announced I was going for the second clearing about one-quarter mile from the first. The FE and I visually maintained eye contact with the other aircraft in an effort to minimize the chances of a mid-air collision. It was turning away from our position as it descended through the clearing. I had to react quickly and do some maneuvering to get our aircraft through that second hole. What worried me the most was that I knew of several 300-foot-tall towers in that area. I think the Lord the ceiling was at 1,000 feet as we descended through the clouds and linked up with Chalk 2 for the short dash to Weide.



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This was a classic case of “get-home-itis,” in which I failed to go with the conservative plan to fly the localizer approach. I saw my PI was having some issues, but, instead of helping him through the situation, I chose to follow the AMC with an impulsive move to expeditiously get us home as a flight.



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U.S. ARMY COMBAT READINESS/SAFETY CENTER

## GET OFF MY TAIL

MAJ. JEFFREY L. WEBBER

South Carolina Army National Guard  
Columbia, S.C.

We all know that the best safety feature on a vehicle is the reflection of a police car in our rearview mirror. That will make anyone drive more cautiously. But how often do we see something else in our rearview — the speed demon who believes they can make us go faster by riding our bumper?

Recently, while driving on a two-lane state highway with a posted speed limit of 55 mph, I had a “soccer mom” on my tail. She was close enough that I could see she had two child seats and about half a store’s worth of groceries in her Dodge minivan. It was obvious she was in a hurry, which I figured was because: a) she was trying to get her ice cream home before it melted; b) she had a screaming child in the backseat that needed changing; or c) she needed to get home to let the dog out before it soiled the carpet. In any event, she wanted me to drive faster, get out of the way or pull over.

If we use the three E’s of safety — enforcement, engineering and education — to remedy the tailgater situation, we are faced with the following realities. Enforcement is not a viable alternative because we can’t expect police to be everywhere. Engineering has been a valuable means of improving a vehicle’s stopping distance once the brakes are applied, but it is only as effective as the reaction time of the driver coupled with the distance maintained between vehicles. Therefore, we must educate drivers about maintaining a proper following distance.

So how do we know what the proper following distance even is? It actually depends on a couple of factors, such as how fast you are driving and the road conditions. The two-second rule is a pretty good guide. Measure your following distance by choosing a stationary object, such as a sign, tree or overpass. When the rear bumper of the vehicle in front of you passes that landmark, start counting, “One thousand and one, one thousand and two.” If you reach the landmark before you finish counting, you are following too closely.

Keep in mind that two seconds is a minimum following distance you should maintain. It applies to daytime driving in good weather conditions at speeds less than 40 mph. Use the two-second-plus rule when traveling at higher speeds, visibility is low, or weather or road conditions are less than ideal.

Under the two-second-plus rule, drivers should maintain a following distance of two seconds — plus additional seconds for each additional driving condition. For example:

IF	ADD
Traveling at more than 40 mph .....	2 seconds
Driving at night .....	1 second
Motorcycle in front of you .....	1 second
Fog or poor visibility .....	1 second
Pavement is wet .....	1 second
You’re being tailgated .....	2 seconds
Tailgating vehicle is a bus or tractor-trailer .....	4 seconds
Towing a trailer .....	2 seconds

(Note: If several conditions apply, add up the extra seconds for all of them.)

Use the two-second and two-second-plus rules to check your following distance from time to time. By doing this, drivers can learn to automatically maintain a safe following distance no matter the conditions.



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## 'STICKING' IT TO VEHICLE ACCIDENTS

DIRECTORATE OF LOGISTICS

Fort Knox Transportation Motor Pool

Fort Knox, Ky.

Often, a simple approach to safety can be effective. What started as an aggressive, revamped vehicle backing safety program evolved into a unique initiative that reduced Fort Knox transportation motor pool nontactical vehicle accidents by 50 percent. Here's how we did it:

For several years, there was a rash of fender benders in the TMP. Although these were minor accidents that only damaged vehicles, personnel from the Fort Knox Directorate of Logistics and contract employees realized something had to change. After carefully studying the mishaps, it became apparent there was a common type of accident that involved driver error — improperly backing a vehicle.

We decided to revise our vehicle backing safety program and implemented several measures such as requiring all contract drivers to "combat" park (when they pull out of a spot, they are facing forward). Additionally, prior to backing up, bus and tractor-trailer drivers had to radio the dispatch office before exiting their vehicles and performing their 360-degree clearance checks. Once drivers reported an "all clear" to dispatch, they were given the OK to proceed. Dispatch personnel also reminded drivers to use a ground guide.

To date, these small steps have removed all backing accidents for DOL-contracted drivers. For our team, this was an indication that implementing easy guidelines would produce the positive effects we were seeking.

We continued to look for other ways to reduce nontactical vehicle accidents for all drivers, not just those who are contracted. With more than 700 vehicles assigned throughout Fort Knox, we knew it wouldn't be feasible or practical for the drivers to radio dispatch for clearance. So we looked for an innovative solution and decided an "in-the-face" reminder to follow Army regulations might do the job. A 50-cent sticker/decals proved a winning solution.

After affixing decals to the fleet of TMP vehicles that stated, "Look before backing! Use ground guides, or dismount & perform a 360 degree walk around. Ensure adequate clearance & safety! Fort Knox Reg: 385-10, Para 4-4," the number of backing accidents dropped to zero for all drivers. During the last quarter of fiscal 2012, the number of overall accidents has dropped an average of 50 percent, and the total cost of vehicle repair has dropped more than 50 percent.

All of these initiatives have been a joint effort among Fort Knox DOL, the contracting office representative and the contractor with a common goal in mind — preventing dangerous and costly accidents. We're in this together, and collaboration and safety sense go a long way!



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## THINK CREW COORDINATION

CHIEF WARRANT OFFICER 3 JASON LILLY  
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If you have never flown a Chinook, one of the first things you should know is it has a thrust control lever for vertical axis control, not a collective. Also, after the Apache's tandem seating configuration, the Chinook has probably the next highest level of breakdown in crew coordination between the rated aviators. This is caused by the extended space between the two pilots. The problem is further compounded on nights with low to no illumination when a pilot can't see the other pilot's actions in the cockpit.

It was just like any other typical, zero percent illumination summer night in Afghanistan. I was flying in the right seat of Chalk 3 in a flight of three Chinooks on a mission to assault three separate helicopter landing zones. The flights to pick up the assaulting force and to the target area both went as planned, as did the flight to our refuel and lager location. After refueling the flight and waiting several hours using the auxiliary power unit, we received the call that our ground force was ready for pick up.

I was on the controls for the exfil of the ground force, which was set up in a small pod near their helicopter landing zone, as always. Some things were slightly different on this night, though. First, the ground element had a single individual in custody, planning to hold him until they were out of the area. In the vicinity was a herd of sheep and the detainee's motorcycle. The ground element was also located in close proximity to the only hard structure anywhere near their HLZ.

My pilot in command and I had the entire picture in sight before the approach was initiated. To avoid over-flight of the ground element, we decided to maneuver the aircraft over the small hut. Recognizing this, I shallowed my approach angle to land forward of the structure. As I continued forward and our aircraft was enveloped in a dust cloud, my PC exerted downward pressure on the thrust control lever in an effort to get us to the ground.

It was at this point that it felt like our aft left landing gear made contact with the hut and rotated the front of the aircraft down and to the right. I was able to correct the attitude and continue forward to set down the aircraft safely. During this time, rotor wash sent the detainee's motorcycle through his flock of sheep. The ramp was lowered, and the ground force boarded, just like any other mission.

The remainder of the night continued just as planned. It was not until we returned to the forward operating base that one of the crewmembers noticed a large scrape on the aft portion of the left-side fuel cell and minor sheet metal damage on the ramp. After this discovery, it became apparent that it was not the landing gear that came into contact with the hut, but the body of the aircraft. Had it been the landing gear, there stands the possibility we would have been yet another statistic of a Chinook landing gear being left on an HLZ. There was ample coordination during the maneuver about heading, distance and altitude, but, besides mentioning it as a hazard, not much else was said about the hut.

Something as simple as a comment from me, stating my intentions to continue forward to avoid contact with the hut, or the PC stating he was coming onto the controls to get us to the ground, could have prevented the incident. The night could easily have turned into a catastrophe. Let's not forget to use all of our crew coordination fundamentals for every aspect of all flights.



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## RIDING THE BEAST

RETIRED AIR FORCE MASTER SGT. RICHARD SHIELDS  
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It was the summer of 1980, and I was a young airman stationed at Mountain Home Air Force Base in southwestern Idaho. I'd recently been promoted to E-3 and decided to reward myself by purchasing a motorcycle. Of course, I wanted the biggest, fastest bike I could afford.

The salesman showed me a lot of motorcycles, but most were out of my price range. Then we came across a used Kawasaki 900cc with dual overhead cams. As I looked over the bike, the salesman was reciting its specifications, as they always do, but I wasn't paying much attention. Then he said the magic word: "fast." I was sold.

I purchased the motorcycle, which I immediately dubbed "the Beast," and told the salesman I'd be back the next day to pick it up. At the time, the state of Idaho didn't require any special license or training to operate a motorcycle. I can't be sure if the base required any special training either, but, regardless, I didn't have any. It wouldn't be long before I received the first indicator that riding without proper training was a bad idea.

The next day, I went to the motorcycle shop on my lunch break to pick up my new ride. I'd never been on a motorcycle this big and heavy before, so the 10-mile ride back to the base's jet engine test facility was a "crash course" in operating it. As I pulled up to the facility, everyone was outside cheering me on. Being young and dumb, I figured this was the perfect time to show them what this bike could do.

I gunned the throttle, not realizing the front wheel would come off the ground, causing me to do a wheelie. To my surprise, I controlled the Beast, but my heart was racing. I knew I had just performed a brainless move, and it wouldn't be my last.

After witnessing my recklessness, my supervisor pulled me aside and asked how long I had been riding a motorcycle. "Since lunchtime today," I told him. I still can see the look on his face as he uttered the words, "Stupid, stupid." He then took a deep breath and told me I should park the bike because it would be the death of me. Today, I regard that as the best guidance he could have given me. Unfortunately, I turned a deaf ear to his advice. All I could hear was everyone cheering as I rode that wheelie and the words of the salesman: "fast."

After a few weeks on the Beast, I was an experienced rider who could hang with the best of them — or so I thought. My confidence was high, which reflected in my efforts to look cool. I began riding without my leather jacket, using excuses like, "It's summertime. It's so much cooler without it." Soon after, I ditched my helmet and riding boots too. I was now on a collision course with destiny. Here's how it happened.

It was a sunny weekend day, and my girlfriend (who is now my wife) and I were invited to a barbecue. Although she pleaded with me not to ride the Beast, I insisted we take it. Reluctantly, she climbed onto the back and put on a helmet. At the barbecue, I had a beer, which infuriated my girlfriend. I told her I was only having one, but she called me a fool and asked me to take her home immediately, which I did. One might hope the story ended there, but, unfortunately, it doesn't.

I went back to the barbecue alone. When someone mentioned heading out to another party, I decided to go too and jumped on my bike. As I followed a friend's vehicle to the party, my mind wasn't focused on the road. I didn't notice his vehicle had stopped in front of me until it was too late and smashed the Beast into the rear bumper. I was thrown over the vehicle, coming down on my head and face 150 feet down the road. I can still picture the look on the face of the person sitting in the passenger seat as I flew past the car.

Miraculously, I survived the accident with little more than some scrapes and bruises. What hurt more than my injuries, though, was knowing I'd let down so many people. From my girlfriend to my commander and friends, I felt as if everyone who considered me a man of integrity now looked at me differently. I vowed this would be a turning point. I stand by that vow 33 years later and have since made safety a big part of my life.



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*Author's note: I have never openly shared the story of my accident. And while I tried to add a bit of humor to my experience, I hope the one thing you take away from it is that motorcycle riding is serious business. Over the years, I have seen countless deaths related to motorcycles; one was a close friend and too many others are the people nearest to my heart — service members. If you plan to ride a motorcycle, please ensure you have the proper training beforehand and always wear your personal protective equipment. Stay safe and live to tell your story of "Riding the Beast."*



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## INGREDIENTS FOR A SAFE WORKPLACE

CHIEF WARRANT OFFICER 4 MARC ASSUMPCA0

Ground Directorate

U.S. Army Combat Readiness/Safety Center

Fort Rucker, Ala.

In today's fast-paced operating environment, workplace safety is an ever-growing concern for leaders. The benefits of maintaining a safe work environment — either garrison or tactical — are many. But ultimately, safety is about what we can do, as leaders, to protect our Soldiers.

Whether in a maintenance facility or repair shop, when safety considerations are overlooked, Soldiers become exposed to unnecessary risks. Safe working environments are morale boosters and conducive to increased productivity, efficiency and readiness. We must aim to eliminate potential accidents from our operations, thus increasing mission success and the safety of our Soldiers.

A force multiplier in an organization is a positive safety culture. This culture should promote safety and effectively influence Soldiers to carry it with them wherever they are and whatever they are doing. The key to culture change is engagement across all levels of command and among Soldiers themselves. A positive culture builds teamwork, reliability and effectiveness among personnel. Paying attention and addressing safety issues is part of a leader's responsibility.

Safety training is another key element in the prevention of work-related injuries, illnesses and death. Training should be geared toward reducing loss of combat power and equipment during Army operations, thus conserving combat power. When properly trained on accident prevention procedures, Soldiers will understand the importance of workplace safety. They'll know how to respond quickly in a dangerous situation. Ultimately, an effective training program can reduce the number of injuries and deaths, equipment damage, illnesses and missed time from work.

Effective communication of safety information is vital to an organization's success. Policies, rules and procedures governing safety within an organization are the center of a safety culture. The overall effectiveness of a safety program is measured through personnel involvement, leadership engagement and supervision at all levels. Leaders must insist on adherence of established safety rules and standards, while continually evaluating their mission for innovative preventive measures that will enhance the unit's safety readiness program. Organizations are required to comply with Department of Defense and Department of the Army policies, as well as Occupational Safety and Health Administration regulations since OSHA directs national compliance initiatives in occupational safety and health areas.

Leaders, it's up to us to provide our Soldiers with a safe working environment. We owe it to them.

## FYI

For tools and programs to assist in establishing and maintaining a safety program, visit the U.S. Army Combat Readiness/Safety Center's website at <https://safety.army.mil/>. For OSHA training materials and regulatory requirements, visit <http://www.osha.gov/> and check out our Workplace Safety page at <https://safety.army.mil/soh/>.



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## CHECKLISTS ARE THERE FOR A REASON

CHIEF WARRANT OFFICER 2 JEREMY ELDER

A Company, 1/101st CAB

Fort Campbell, Ky.

Pilots are creatures of habit. While deployed, I tried to do things the same way before every flight so I wouldn't forget anything.

While deployed in RC-South in Afghanistan, I was attached to a task force of three Black Hawks and two Apaches to conduct operations for the special ops community. On a mission in May 2010, I arrived at the command post with my co-pilot. It was business as usual. The pilot in command reviewed the logbook while I went for a weather briefing. It was going to be a red illumination night, so zero percent illumination. Then, I received an S-3 update on friendly forces and an S-2 briefing on enemy forces.

We walked out to the aircraft, preflighted it, secured our gear and sat down with the other AH-64D team for a brief. Things were going well, and I was prepared for the mission. I had more than 150 hours flying with my PC and felt we understood each other in the cockpit for flight operations. It was at the point where I probably trusted the PC more than I should have. I had become complacent flying with him.

After the run-up and checks, we departed as an attack weapons team and linked up with two Black Hawks and escorted them into their landing zones. So far, everything was going well. I made contact with the SEAL team for a check-in. I told them we had about an hour and 45 minutes of station time before we needed to refuel. When it was time to refuel, we departed the area as an Air Weapons Team to a forward arming and refueling point.

We arrived at the FARP and landed with no issues. Usually, I would pull out the checklist, but not today. Once we landed, the PC pulled back the No. 2 engine as usual for hot refuel. I turned off the equipment, ended all radio transmissions, took off my helmet display unit and put on my goggles just to see how dark it was. It was very dark, and I noticed a chemical light adjacent to my window. It was a FARP Soldier waving for us to move over to the left so the grounding strap could be attached.

I told the PC we needed to move to the left. After I cleared him left and right, he pulled in power to move to the left. When we came off the ground, I heard the dreaded noise of a low rotor warning, and the PC dropped the collective. We hit the ground hard and the aircraft shook. I was blind at the time because I no longer had on the goggles and my HDU was pulled away from my face. We checked the systems page and found no overtorque messages and no issues to the aircraft, just two scared pilots. After telling the PC I was not going to talk for a minute or two, I placed my HDU back on my face and regained my composure.

After reviewing what had just happened, I realized our problem was caused by us not returning power to the No. 2 engine before attempting to move. I pulled out my checklist, like I should have done before the incident, and prepped for takeoff to link up with the ground force and extract them.

We talked as a crew after this incident and both realized we had become complacent. So, here are the lessons I learned that day: Always use your checklist! If I had done a before-takeoff check, this would not have happened. There was no rush and we just reacted to the moment.

Always back up each other. The other crewmember, no matter how good he or she is, or their rank or job (instructor pilot or standardization instructor pilot), can make mistakes just as much as a new guy.

I hope this helps you. The valuable lesson I learned that day will always stay with me. The checklist has a purpose. Use it.



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## CORNERING CONTROL PART III:

### THE THROTTLE

DAVID L. HOUGH

[www.soundrider.com](http://www.soundrider.com)

*Editor's note: In the April and May issues of Knowledge, author David L. Hough provided Parts I and II of his series about maintaining control of a motorcycle when riding in a curve. In this issue, Hough offers the third and final part of the installment, "The Throttle."*

When and how you roll on the throttle — or roll off the throttle — has a lot to do with cornering control. For instance, imagine leaning a 100-horsepower bike into a tight turn and then suddenly rolling on a big handful of throttle. The rear tire may already be close to the limits of traction, and a sudden increase in power would very likely slide the rear end out. That example makes it obvious that engine thrust can push the bike around.

In a corner, it would be best to maintain the weight distribution on the tires. Even if the bike is in a straight line, rolling on the throttle tends to shift weight onto the rear wheel. Rolling off the throttle shifts weight toward the front. That same front-rear weight shift occurs in a corner. To maintain traction, it would be best to maintain weight distribution while leaned over.

Let's note that even if the tires don't seem to be sliding sideways on the pavement during a curve, they are. In a curve, the flexible tire rubber allows the bike to move in a slightly different direction from where the wheels are pointed. It's called drift — or more correctly, sideslip. Rolling on a bit more throttle tends to increase the slip angle of the rear wheel, pointing the bike more toward the curve.

Braking also affects sideslip. Imagine jamming on the rear brake while leaned over. It's not difficult to imagine the rear tire sliding out, dropping the bike on its low side. Let's note that rolling off the throttle is also rear-wheel braking, as engine compression tries to slow the rear wheel.

#### Tire Contact Rings

As the bike leans over into a curve, the location of the tire contact rings moves off center. That means engine thrust or braking are off center. So, rolling on or off the throttle while leaned over will push or pull on one side of the rear tire, and that will have an affect on steering the bike.

Not only does a tire's contact ring (contact patch) move off center as the bike leans over, the ring shrinks in diameter. Even if you're attempting to hold a steady throttle, the bike will decelerate as it leans over onto the smaller-diameter contact rings. To maintain bike speed, you'll need to roll on a bit more throttle as you lean the bike over. One of the advantages of wide, low-profile tires is less change in contact ring diameter, but the tradeoff is the ring moving farther out to the side as the bike leans over.

Put all of this together and you can see that throttle control affects steering, whether accelerating or decelerating. As it happens, throttle control and cornering lines can work together. If you're following a nice delayed apex line, you can ease on the throttle as you turn the bike in and then gradually roll on more throttle through the rest of the curve. That's much smoother than decelerating toward a mid-curve apex on a trailing throttle and then getting back on the throttle while leaned over.

The ideal throttle control would be decelerating toward the turn-in point while in a straight line, then easing on the throttle as you lean the bike over. You can continue to ease on more throttle in the last half of the curve, since the bike will be straightening up, and the side loads on the tires will be decreasing.

#### Throttle-Brake Transitions

With the bike leaned over into a turn, maintaining traction is a top priority. And how you roll on or off the throttle can determine whether you keep the tires hooked up or they slide out.

Sudden changes in throttle momentarily demand traction. That is, if you were to suddenly roll the throttle open while leaned over, the rear tire would demand more traction as it attempts to accelerate the bike forward. It's very possible to slide out the rear tire from overzealous roll-on.



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Sudden braking input also demands traction. If you were to suddenly jam on the rear brake while leaned over into an aggressive curve, you should expect the rear tire to slide out. What may not be obvious is that suddenly snapping the throttle closed has an effect similar to stepping on the rear brake pedal. We must also remember that accelerating or braking both cause weight transfer between the two tires, and that changes the traction available on either tire.

To help maintain traction, both throttle input and braking should be as smooth as possible. When rolling on the throttle, it should be gradual. It's just as important to roll off the throttle smoothly. Likewise, when braking, you should apply the brakes progressively over approximately two seconds. And when releasing the brakes, you should ease them off over two seconds.

You can practice smooth throttle and brake application in a straight-line exercise. At a speed of say, 40 mph, ease the throttle closed as you progressively squeeze on the front brake. Don't clutch or shift down. As the bike decelerates to about 20 mph, ease off the brake as you smoothly roll back on the throttle. The goal is to transition from throttle to brakes and back to throttle so smoothly that the bike isn't upset.

Controlling the throttle and brakes simultaneously requires some right hand dexterity. You'll have to find a technique that works for you. Some riders prefer to hold the throttle with thumb and forefinger and brake with the three outer fingers. Others prefer to hold the throttle with thumb and outer two fingers, and brake with the two inner fingers. Which fingers you use for braking may depend upon the force needed at the lever on the bike you're riding.

You can expect surface traction to change, even during a corner. A patch of sand or dribble of diesel oil will reduce traction, and you can feel a momentary slip of either or both tires. The typical (and wrong) survival reaction when a rider feels a tire slip sideways is to snap the throttle closed, but that can turn a short slide into a major crash. If the tire can regain traction, it will. It's difficult to resist the urge to snap off the throttle, but it's important to hold a steady throttle and steer toward the direction of the skid.

## Uphill, Downhill

While the ideal technique for level turns is to gradually ease on more throttle from turn-in through the exit, uphill and downhill turns require different tactics. When approaching an uphill turn, especially a tight switchback, the front end will be lighter and therefore the front tire will have reduced traction. Rolling on the throttle during a tight uphill turn can cause the front tire to slide out. That's especially likely when carrying a passenger or a heavy load of gear on the back of the bike.

When approaching a tight, uphill turn, maintain a slightly higher speed to allow inertia (momentum) to carry the bike up and around. Then smoothly ease on more throttle as you pull the bike upright.

When cornering downhill, you may need to brake to keep speed from increasing. Riding downhill, the front tire will be more heavily loaded, so you can use more front brake in downhill corners. If you're using engine braking to hold speed, remember, engine braking only applies to the rear tire, which already has decreased traction due to the forward weight shift.

*Editor's note: David L. Hough is a long-time motorcyclist and journalist. His work has appeared in numerous motorcycle publications, but he is best known for the monthly skills series "Proficient Motorcycling" in Motorcycle Consumer News, which has been honored by special awards from the Motorcycle Safety Foundation.*



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## THE HEAT IS ON AT SERE SCHOOL

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There are many concerns for students starting the U.S. Army Survival Evasion Resistance Escape school — one of the main ones being the environmental stresses on the body. SERE-C training is both extremely challenging and rewarding for those who complete the course. One of those challenges for students is the heat at Fort Rucker, Ala. The area has a nine-month window (between March and November) of potentially excessive warm to extremely hot days (two to three weeks above 100 F), requiring constant hydration and water procurement by the students. After all, this is personal survival training in harsh environments.

The command team for the 21-day SERE course has constant oversight during each day of training. Throughout each phase of training and during seasonal changes, they consistently apply a risk mitigation plan through use of a composite risk management worksheet, DA Form 7566, and as outlined in Field Manual 5-19, Composite Risk Management. The entire SERE school team reviews the risk matrix for each class. To stay proficient, the medical staff trains annually on a series of first aid requirements. They also train extensively on the prevention of heat injuries and discuss any needed updates or changes that may need to be incorporated into the training to prevent them.

At SERE school, rescheduling or altering training is difficult because, by design and through the approval of the Joint Personnel Recovery Agency, the intensity of the training is maintained to purposefully stress the student, thus adding to the realism of being an isolated person in a combat and operational environment. Given the rigorous training, as well as the purposeful and environmental stresses, SERE school still achieves, on average, a graduation rate of 98 percent. This is no small feat for the students or staff.

The school maintains a comprehensive standard operating procedure to maintain the students' health and help prevent heat injuries. All risk mitigations occur simultaneously during the training, and the entire SERE team, government and contractor alike, has the ability and responsibility to monitor the students' health and help minimize heat injuries. The following procedures and actions are built into the approved SERE school risk mitigation plan that has 1st Aviation Brigade and U.S. Army Aviation Center of Excellence oversight. These actions can be used by other commands to help minimize heat injuries during training and combat. Develop, review and CASE (copy and steal everything) that can help with the implementation of a heat-injury risk mitigation plan. Here at SERE, the plan is reviewed prior to each class; it doesn't just sit on the shelf collecting dust. The plan is a living document that is constantly updated based upon new products, new scientific data and previous success or failure of heat mitigation solutions.

Command involvement with the medical staff is a must. Developing the procedures that are in place have allowed for improved preventive procedures and treatment, thus increasing graduation success.

The students undergo a stringent medical review before they start the course. The medical staff evaluates the students' overall health, specifically looking for individuals who've suffered previous heat-related injuries. The extreme heat poses a greater risk to these individuals, as they're more susceptible to heat injuries. However, having a previous heat injury doesn't prevent a student from attending the course. These students are identified with a red tab that's worn as part of their uniform. This technique doesn't single them out; rather, it helps the staff readily identify the student during intense training and increased heat, hopefully preventing another injury. All students are expected to stay adequately hydrated regardless their pre-disposition to heat injuries. With training and education about the symptoms of dehydration, as well as how to procure and purify their water, the students' goal is to stay adequately hydrated, survive and return with honor.

The SERE school medical staff is available 24/7 during all training. One of their top priorities is to identify students that may become a heat casualty. Students are consistently reminded to stay hydrated, and a urine color chart is used to help monitor their levels of hydration. The medical staff also maintains a log to monitor when each student has urinated. This technique further helps determine levels of hydration per individual. Information gleaned from the logs determines how much water the students should drink based on the temperature and the individual's hydration level. The medics have the skills to treat dehydration and rehydrate the student and safely return them to training.



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Normally, the day of a heat injury or dehydration is not the day that caused the issues. Heat injuries are cumulative and decreased hydration or decreased electrolytes in the days leading up to the event are most often the culprit. To help mitigate the risk of succumbing to the heat, students are urged to drink and eat properly and increase their salt (sodium chloride) intake. SERE school instructors limit the students' caffeine intake to help prevent the side effects as a diuretic. When repeatedly exposed to higher temperatures, students sweat excessively, and the staff can add oral rehydration salts to their water sources.

A wet bulb globe temperature device is also constantly monitored during all phases of training and, using TB Med 507, Heat Stress Control and Heat Casualty Management, the allowable and appropriate adjustments to training are applied. The recommended fluid replacement guidelines for warm weather training are in effect and monitored throughout training. Training doesn't stop because of the rising temperatures.

During field training, students stay in constant communication with an operational controller. Students report their health status and water quantities. If water availability during a drought is not available based on the field topography, water sources are provided to ensure the students have adequate hydration.

Acclimatization is extremely important. Flight students at Fort Rucker come from a predominately academic setting before starting the course. Most students haven't been out in the hot weather to the extent needed for the challenges they'll encounter during the course. Students coming from a more northern climate just days before the course definitely have not experienced the heat of lower Alabama. To acclimate, these students need to gradually expose themselves to the heat and increase their exercise workloads during the hotter times of the day. Acclimatization should happen at least a month before training. The more exposure ahead of time, the better.

The medical team continually works with other Department of Defense SERE schools. They attend meetings to discuss the intense training and exchange ideas and SOPs in effort to minimize medical injuries during training.

Based on its location and reputation for hot weather, the SERE school at Fort Rucker poses the highest risk of heat injury for students, compared to the other DoD SERE training locations. All of the above-mentioned procedures, best practices and attention to the health of the students have been instrumental in assisting the SERE command team safely graduate more than 2,200 students annually. Be part of that success. Prepare yourself for "The Heat of SERE!"



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## ACCIDENT BRIEFS

### ROTARY-WING

#### CH-47F

##### Class A

A Soldier died when the aircraft rotor wash toppled a barrier gate, pinning him underneath.

#### OH-58D(R)

##### Class A

The pilot in command died when the aircraft crashed during a training flight, reportedly while the crew was executing a precautionary landing. The aircraft was destroyed in the crash.

#### UH-60L

##### Class A

The aircraft crashed during a training flight.

### GROUND

#### ACV

##### Class A

A Soldier died after he was run over by an M3A3 Bradley Combat Fighting Vehicle. The Soldier had dismounted the vehicle to establish an observation point when the accident occurred.

##### Class B

Four Soldiers were injured when their Mine Resistant Ambush Protected vehicle overturned. The MRAP was in a security patrol when the driver apparently lost control. The injuries were a result of loose items inside the vehicle.

#### AMV

##### Class B

Six Soldiers were injured when the Heavy Equipment Transporter vehicle (with trailer) they were riding in overturned. The vehicle was in a movement convoy when the driver lost control while negotiating a turn.

### PERSONNEL INJURY

##### Class A

A Soldier was killed at his residence when he was mistaken for an intruder and shot by a Family member.

##### Class B

A Soldier was injured when he was struck by a round from his privately owned weapon. The Soldier was carrying the loaded weapon when he tripped. A round discharged, struck him in the forearm and then lodged in his knee.

A Department of the Army Civilian was injured when his finger became caught on the metal tarp loop of a semi-trailer. The DAC was closing a tarp on the trailer when he slipped, catching his wedding ring on the loop. Part of his ring finger was amputated.

#### PMV-4

##### Class A

A Soldier died when his vehicle left the road, struck a tree and overturned.

A Soldier was killed when his vehicle was struck by a commercial truck that ran a traffic light.



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# KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

Two Soldiers died when the driver lost control of the vehicle at a high rate of speed and struck an oncoming vehicle.

A Soldier was killed when he lost control of his speeding vehicle, striking a utility pole and then a tree. The highway patrol reported the Soldier was not wearing a seat belt.

A Soldier and his wife and child were critically injured when their vehicle contacted ice in the road and slid into oncoming traffic, resulting in a head-on collision. All three were wearing seat belts.

## ATV

### Class A

A Soldier died when his all-terrain vehicle overturned, causing him to strike his head on the pavement.

*Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, email [usarmy.rucker.hqda-secarmy.list.safe-knowledge@mail.mil](mailto:usarmy.rucker.hqda-secarmy.list.safe-knowledge@mail.mil).*



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